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10/622,404	07/18/2003	Tien Le Nguyen	AESN3011	4145

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EXAMINER	
VO, LILIAN	
ART UNIT	**PAPER NUMBER**
2195	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/622,404	NGUYEN ET AL.	
	Examiner	Art Unit	
	Lilian Vo	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 – 20, 22 – 27, 29 – 31 and 33 - 36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 – 20, 22 – 27, 29 – 31 and 33 - 36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 20, 22 – 27, 29 – 31 and 33 - 36 are pending. Claims 21, 28 and 32 have been cancelled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawata et al. (US Pat. Publication 2002/0032777, hereinafter Kawata) in view of Primak et al. (US Pat. Publication 2002/0010783, hereinafter Primak).

4. Regarding **claim 1**, Kawata discloses a method of cooperatively loud-balancing a cluster of server computer systems for servicing client requests issued from a plurality of client computer systems, wherein said client computer systems are mutually independent in issuing client requests to said cluster of server computer systems and wherein said cluster of server computer systems interoperate with said plurality of client computer systems to establish a cooperative load-balancing of said cluster of server computer systems (page 1, paragraph 3, page 2, paragraphs 38 - 40), said method comprising the steps of:

a) selecting, by a client computer system, a target server computer system from said cluster of server computer systems to service a particular client request using available accumulated selection basis data, wherein said available accumulated selection basis data is accumulated from said cluster of server computer systems (page 1, paragraph 3: the client looks at the load status for each server in the state management server and sends its service request to the server with the lowest load);

b) evaluating said particular client request to responsively provide instance selection basis data dynamically dependent on the configuration of said target server computer and said particular client request (page 2, paragraphs 38 - 40); and

c) incorporating said instance selection basis data into said available accumulated selection basis data to affect the subsequent selection of said target computer system with respect to a subsequent instance of said particular client request (page 2, paragraphs 40 - 41).

Kawata did not disclose the target server evaluates the client request. Nevertheless, Primak discloses the selected server evaluates the client's request (page 4, paragraph 40). Therefore, it would be obvious for one of an ordinary skill in the art, at the time of the invention was made, to incorporate Primak's teaching with Kawata's to have the selected server evaluates its capability to determine whether it is suitable to handle a client's request.

5. Regarding **claim 2**, as modified Kawata discloses the instance selection basis data includes representation of a dynamically determined performance level of said target server computer system and wherein said available accumulated selection basis data incorporates said

instance selection basis data with identifications of said target server computer and said particular client request (Kawata: page 2, paragraphs 38 - 41).

6. Regarding **claim 3**, as modified Kawata discloses the instance selection basis data includes a representation of a policy evaluation of the particular client request relative to the target server computer system (Kawata: abstract, page 1, paragraph 7).

7. Regarding **claim 4**, as modified Kawata discloses the instance selection basis data includes a load value and a selection weighting value, wherein the load value represents a dynamically determined performance level of the target server computer system and the selection weighting value represents a policy evaluation of the particular client request relative to the target server computer system and wherein the available accumulated selection basis data incorporates the instance selection basis data with identifications of the target server computer and the particular client request (Kawata: page 2, paragraphs 38 – 41, page 1, paragraphs 6 – 7 and 10).

8. Regarding **claim 5**, as modified Kawata discloses the step of selecting selects the target server computer system based on predetermined selection criteria including the relative values of the load value and the selection weighting value with respect to said particular client request as recorded in the available accumulated selection basis data (Kawata: page 2, paragraphs 38 – 41, page 1, paragraphs 6 – 7 and 10).

9. Regarding **claim 6**, as modified Kawata discloses the instance selection basis data provides for a rejection of the particular client request and wherein the step of selecting includes selecting an alternate server computer system from the cluster of server computer systems on the target server system to service the particular client request based the available accumulated selection basis data (Primak: page 4, paragraph 40).

10. Claims 7 – 19, 25 – 27 and 29 – 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mangipudi et al. (US Pat. Application Publication 2004/0162901, hereinafter Mangipudi) in view of Aman et al. (US 6,249,800, hereinafter Aman).

11. Regarding **claim 7**, Mangipudi discloses a method of load-balancing a cluster of server computer systems in the cooperative providing of a network service to host computers operating mutually independent of one another, the method comprising the steps of:

a) selecting, independently by each of a plurality of host computers, server computers within a computer cluster to which to issue respective service requests (page 2, paragraph 18, page 4, paragraph 38, page 5, paragraph 44, fig. 2);

b) responding, by a corresponding one of the plurality of host computers, to the rejection of a predetermined service request by selecting a different server computer to which to issue the predetermined service request (page 6, paragraph 51, page 7, paragraph 62);

c) receiving, in regard to the respective service requests by the respective ones of the plurality of host computers, load information from the respective server computers, wherein load

information is dynamically generated by respective server computers (pages 2 - 3, paragraph 18); and

d) evaluating, by each of the plurality of host computers, the respective load and weight information received with respect to server computers of the computer cluster as a basis for a subsequent performance of the step of selecting (pages 2 - 3, paragraph 18, 21, page 5, paragraph 44).

Mangipudi did not clearly disclose the use and retrieval of weight information from the servers. Nevertheless, Aman discloses the use and retrieval of weight information from the server (col. 14 lines 44 – 61 and col. 16 lines 36 - 52). Thus, it would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to incorporate Aman's teaching together with Mangipudi so that the information can be used in selecting an appropriate server to provide a sufficient service.

12. Regarding **claim 8**, as modified Mangipudi discloses the step of determining said weight information by each of said server computers with respect to each service request received, said weight information being determined from a predefined policy association between a received service request and the identity of the one of said server computers that receives the service request (Aman: col. 16 lines 36 - 52).

13. Regarding **claim 9**, as modified Mangipudi discloses the step of distributing initial information by said cluster of server computers of said host computers, said initial information

providing selection lists of said server computers to said host computers (Mangipudi: page 3, paragraph 21).

14. Regarding **claim 10**, as modified Mangipudi discloses the load information is representative of a plurality of load factors including network loading and processor loading (Mangipudi: page 3, paragraph 18, 21).

15. Regarding **claim 11,** as modified Mangipudi discloses the load information is representative of the processing of a current set of service requests including a plurality of processor functions (Mangipudi: page 5, paragraph 44, page 6, paragraph 47, 50, 51).

16. Regarding **claim 12,** as modified Mangipudi discloses the load information includes one or more load values representing processing functions internal to a server computer (Mangipudi: page 6, paragraph 51, page 7, paragraph 57).

17. Regarding **claim 13,** Mangipudi discloses a server cluster operated to provide a load-balanced network service, the server cluster comprising:

a) a plurality of server computers individually responsive to service requests to perform corresponding processing services, wherein said server computers are operative to initially respond to said service requests to provide load values, wherein said load values represent the current operating load of a respective server computer relative to a particular service request

(page 3, paragraph 21, 24, page 4, paragraph 38, page 5, paragraph 44, page 6, paragraph 47, 51, 55, 56 and page 7, paragraph 57); and

b) a host computer system operative to autonomously issue the service requests respectively to the plurality of server computers, the host computer system further operative to select a target server computer from the plurality of server computers to receive on instance of the particular service request based on the load and weight values (page 2, paragraph 18, page 4, paragraph 38, page 5, paragraph 44, fig. 2).

With respect to the step of a plurality of server computers individually responsive to service requests to perform corresponding processing services, wherein the server computers are operative to initially respond to said service requests to provide load values, Mangipudi discloses "each request is serviced by transmitting a response from at least one servers to the client device that transmitted the request. Each server in the group or cluster is capable of responding to requests of other servers in the group to promote load sharing within the group" (page 5, paragraph 44) and the intelligent agents deployed on each server monitor several server attributes/parameters including the load information and report back to the policy engine at the router for maintaining service level requirements for each class (page 5, paragraph 55). Mangipudi did not clearly disclose the use and retrieval of weight information which represent a policy-based priority level of a respective server computer relative to a particular service request. Nevertheless, Aman discloses the use and retrieval of weight information which represents a policy-based priority level of a respect server relative to a particular service request (col. 14 lines 44 – 61 and col. 16 lines 36 - 52). Thus, it would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to incorporate Aman's teaching

together with Mangipudi so that the information can be used in selecting an appropriate server to provide a sufficient service.

18. Regarding **claim 14**, as modified Mangipudi discloses the host computer is operative to collect the load and weight values from the plurality of server computers in connection with the issuance of respective service requests to the server computers and the selection of the target server computer is based on the relative temporal age of the load and weight values (Mangipudi: page 2, paragraph 18, page 5, paragraph 44, page 6, paragraph 55).

19. Regarding **claim 15**, as modified Mangipudi discloses each of the server computers include a policy data set store that provides for the storage of a distinct server configuration and the load and weight values are dynamically determined by the server computers in response to the service requests based on the distinct server configurations of the server computers (Mangipudi: page 4, paragraph 38, page 5, paragraph 44, page 7, paragraph 59, 60).

20. Regarding **claim 16**, as modified Mangipudi discloses the distinct server configurations include the distinct identities of the server computers (Mangipudi: page 4, paragraph 38, page 6 – 7, paragraph 56).

21. Regarding **claim 17**, as modified Mangipudi discloses the distinct server configurations include distinct policy data relative to the service requests, wherein the host computer system is operative to collect, relative to respective service requests, and provide attribute data to server

computers, and wherein the server computers evaluate the attribute data in conjunction with the distinct policy data to determine the weight values (Mangipudi: page 4, paragraph 38, page 6, paragraph 55, page 7, paragraph 60 – 62).

22. Regarding **claim 18**, as modified Mangipudi discloses the plurality of sever computers implement a security processing service, wherein the host computer system is operative to selectively route network transported data through the server computers dependent on the service requests as evaluated by the plurality of the server computers (Mangipudi: fig. 4, page 4, paragraph 40, page 5, paragraph 44, 45).

23. Regarding **claim 19**, as modified Mangipudi discloses the host computer is operative to initiate respective data transfer transactions for each of the server requests, wherein the default routing of each data transaction initially provides for the transfer of corresponding ones of the service requests to respective ones of the plurality of server computers, and wherein the respective ones of the server computers determine whether the subsequent routing of network data within the respective data transfer transactions includes routing the network data within the respective data transfer transactions through the server computers (Mangipudi: page 4, paragraph 38, 39, page 6, paragraph 51, page 7, paragraph 62, page 5, paragraph 44).

24. **Claims 25 – 27 and 29** are rejected on the same ground as stated in claims 2 and 7 – 9 above.

25. Regarding **claim 30**, as modified Mangipudi discloses the client requests are issued with respect to client computer systems, wherein the particular client request includes attributes descriptive of a particular client computer system that issued the particular client request, and wherein the relative prioritization reflects the evaluation of the attributes with respect to the particular server computer system (Mangipudi: page 4, paragraph 38, page 5, paragraph 44, page 6, paragraph 55).

26. Claims 20, 22 – 24, 31 and 33 - 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mangipudi et al. (US Pat. Application Publication 2004/0162901) in view of Ballard (US 6,078,960) and further in view of Aman et al. (US 6,249,800).

27. Regarding **claim 20**, Mangipudi discloses a computer system providing, in support of a plurality of client computer systems, a network service through a scalable cluster of server computer systems, the system comprising:

a) a plurality of server computers coupled to provide a defined service, wherein a server computer of the plurality provides a response, including dynamically determined load information, in acknowledgment of a predetermined service request issued to the server computer system, the response selectively including nonacceptance of the predetermined service request (page 4, paragraph 38, page 6, paragraph 51, page 7, paragraph 62).

Mangipudi did not clearly disclose the additional limitation as claimed. Nevertheless, Ballard discloses the system comprising a plurality of client computers coupleable through a network to the servers having an identification list of the server computer systems, the client

computer system being operative to autonomously select a first server computer system from the identification list to which to issue the predetermined service request, wherein the client computer system is reactive to the response, on indicated nonacceptance of the predetermined service request, to autonomously select a second server computer system from the identification list to which to issue the predetermined service request, and wherein the client computer system is responsive to load information of the response in subsequently autonomously selecting the first and second server computer systems (col. 1, lines 46 – 56, col. 2, lines 11 – 28, col. 6, lines 52 - 64). Aman discloses the use and retrieval of weight information from the server in selecting a particular server relative to a particular service request (col. 14 lines 44 – 61 and col. 16 lines 36 - 52). Thus, it would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to incorporate Aman's teaching together with Mangipudi and Ballard's to provide a more reliable and flexible technique for achieving load balancing of client demand (Ballard: col. 1, lines 39 – 41).

28. Regarding **claim 22**, as modified Mangipudi discloses the plurality of server computer systems include respective policy engines and wherein the weight information reflects an association between a server computer policy role and the predetermined service request. (Mangipudi: page 3, paragraph 21).

29. Regarding **claim 23**, as modified Mangipudi discloses the predetermined service request includes predetermined client process attribute information and wherein the respective policy engines are responsive to the predetermined client process attribute information in determining

the server computer policy role relative to the predetermined service request (Mangipudi: page 4, paragraph 38, page 5, paragraph 44, page 6, paragraph 55).

30. Regarding **claim 24**, as modified Mangipudi discloses the load information includes a value representing network and server processor performance (Mangipudi: page 4, paragraph 39, page 5, paragraph 47, 48, 50, 55).

31. **Claim 31** is rejected on the same ground as stated in claim 20 above.

32. Regarding **claim 33**, as modified Mangipudi discloses the step of selecting includes a step of aging the accumulated selection information (Ballard: fig. 4a, 4b and col. 2, lines 17 – 28).

33. **Claim 34** is rejected on the same ground as stated in claim 7 above.

34. Regarding **claim 35**, as modified Mangipudi discloses the host process is executed on a client computer system (Ballard: col. 1, lines 44 – 67).

35. Regarding **claim 36**, as modified Mangipudi discloses the host process is executed on a gateway computer system couple through a communications network with a plurality of client computer systems (Mangipudi: figs. 2 and 3).

Response to Arguments

36. Applicant's arguments with respect to claims 7, 20, 25, 29,30 and 31 have been considered but are moot in view of the new ground(s) of rejection. With respect to applicant's argument regarding claim 1, they are not persuasive for the reasons set forth below.

37. Regarding applicant's remark that the reference provides no teaching or suggestion that the client retain any information about the redirection for any purpose whatsoever (page 12 last paragraph – page 13 1st paragraph), the examiner disagrees.

38. Regarding applicant's remark that "...a person of ordinary skill would consider the 'load status' reported to the 'state management server' to be likely nothing more than a single value sufficient to allow comparison..." (page 14 7th paragraph), the examiner disagrees.

39. Regarding applicant's remark that "...a person of ordinary skill would readily recognize this 'load balancer' as implementing the same fundamental architecture as Kawata...there is no credible basis to believe that a person of ordinary skill would read the summary as teaching or suggestion any meaningful participation of clients in the load-balancing operation described." (page 15 3rd paragraph), the examiner disagrees.

40. Regarding applicant's remark referring to claim 1 that Kawata fails to teach or suggest any involvement of a client selecting a particular target server using selection basis data accumulated from instance basis data generated by the target server based on specific client

requests (page 16 4th paragraph), the examiner disagrees. Kawata discloses in page 1 paragraph 3 that the client looks at the load status for each server in the state management server and sends its service request to the server with the lowest load. On page 2 paragraphs 40 – 41 Kawata discloses that the server load management table is updated each time a service request packets is received from a client.

41. Regarding applicant's remark that the reference "fails to teach or suggest that a client accumulated any information...load information accumulated by the client ..." (page 16 4th paragraph), applicant is arguing a feature of the invention not specifically stated in the claim language, which is improper. Claim subject matter, not the specification, is the measure of invention. Limitations in the specification cannot be read into the claims for the purpose of avoiding the prior art. In re Self, 213 USPQ 1,5 (CCPA 1982); In re Priest, 199 USPQ 11,15 (CCPA 1978).

42. Regarding applicant's remark referring to claim 1 that the references fail to teach or suggest the dynamic generation and contribution of instance load data from specific servers to specific clients for use by those clients in selecting a specific server to service a request (page 16, 6th paragraph), the examiner disagrees. Kawata discloses in page 1 paragraph 3 that the client looks at the load status for each server in the state management server and sends its service request to the server with the lowest load. On page 2 paragraphs 40 – 41 Kawata discloses that the server load management table is updated each time a service request packets is received from a client.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Thursday 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo
Examiner
Art Unit 2195

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April 29, 2006

LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER